

EDL Flight Concepts Project

Game Changing Development Program | Space Technology Mission Directorate (STMD)



ANTICIPATED BENEFITS

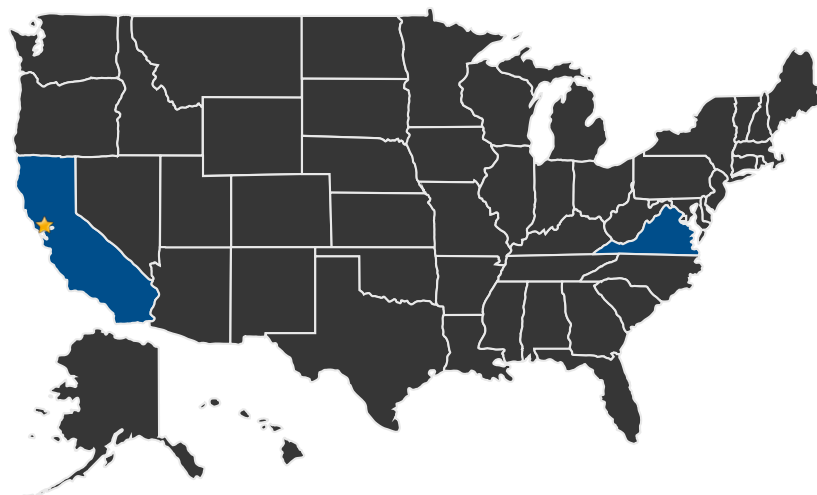
To NASA funded missions:

There is no direct benefit to NASA funded missions, although the carrier spacecraft (TechEdSat) could be used to conduct LEO tests of candidate technologies.

DETAILED DESCRIPTION

Small scale flight testing can be conducted within the scope of ESM in several areas, including low-cost sounding rocket testing and cube-sat based testing.

U.S. WORK LOCATIONS AND KEY PARTNERS



■ U.S. States
With Work

★ Lead Center:
Ames Research Center

Other Organizations Performing Work:

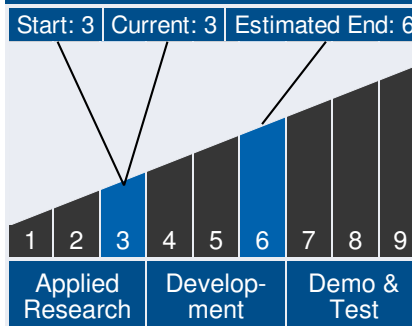
- University of Idaho (Moscow, Idaho, ID)



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Technology Maturity



Management Team

Program Executive:

- Lanetra Tate

Program Manager:

- Mary Wusk

Project Manager:

- Michael Wright

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Technology Areas

Primary Technology Area:

Entry, Descent, and Landing
Systems (TA 9)

- └ Aeroassist and Atmospheric
Entry (TA 9.1)
 - └ Deployable Hypersonic
Decelerators (TA 9.1.4)

Secondary Technology Area:

Thermal Management
Systems (TA 14)

- └ Thermal Protection
Systems (TA 14.3)
 - └ Ascent/Entry TPS (TA
14.3.1)

Entry, Descent, and Landing
Systems (TA 9)

- └ Aeroassist and Atmospheric
Entry (TA 9.1)
 - └ Deployable Hypersonic
Decelerators (TA 9.1.4)
 - └ Mechanically-Deployed
Entry Systems (TA
9.1.4.2)
 - └ Flexible Structural
Materials (TA 9.1.4.4)
 - └ Non-Propulsive Flight
Control Effectors (TA
9.1.4.5)

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Technology Areas (cont.)

Thermal Management
Systems (TA 14)

- └ Thermal Protection
Systems (TA 14.3)

- └ Ascent/Entry TPS (TA
14.3.1)

- └ Rigid Ablative Thermal
Protection Systems (TA
14.3.1.1)

- └ Flexible/Deployable
Thermal Protection
System (TA 14.3.1.3)

- └ Thermal Protection
System Modeling and
Simulation (TA 14.3.2)

- └ Coupled Multi-
Dimensional
Flow/Material

- Response/Thermal/Struct
Analysis (TA 14.3.2.1)

- └ Shock Radiation
Modeling (TA 14.3.2.2)

DETAILS FOR TECHNOLOGY 1
